PRODUCT INFORMATION PACKET

Model No: TCE2003A2121GAA001
Catalog No: TCE2003A2121GAA001
TerraMAX® Increased Safety Motors Ex eb, Totally Enclosed Fan Cooled, 270 HP, 3 Ph, 50 Hz, 400 V, 992 RPM, 355M Frame

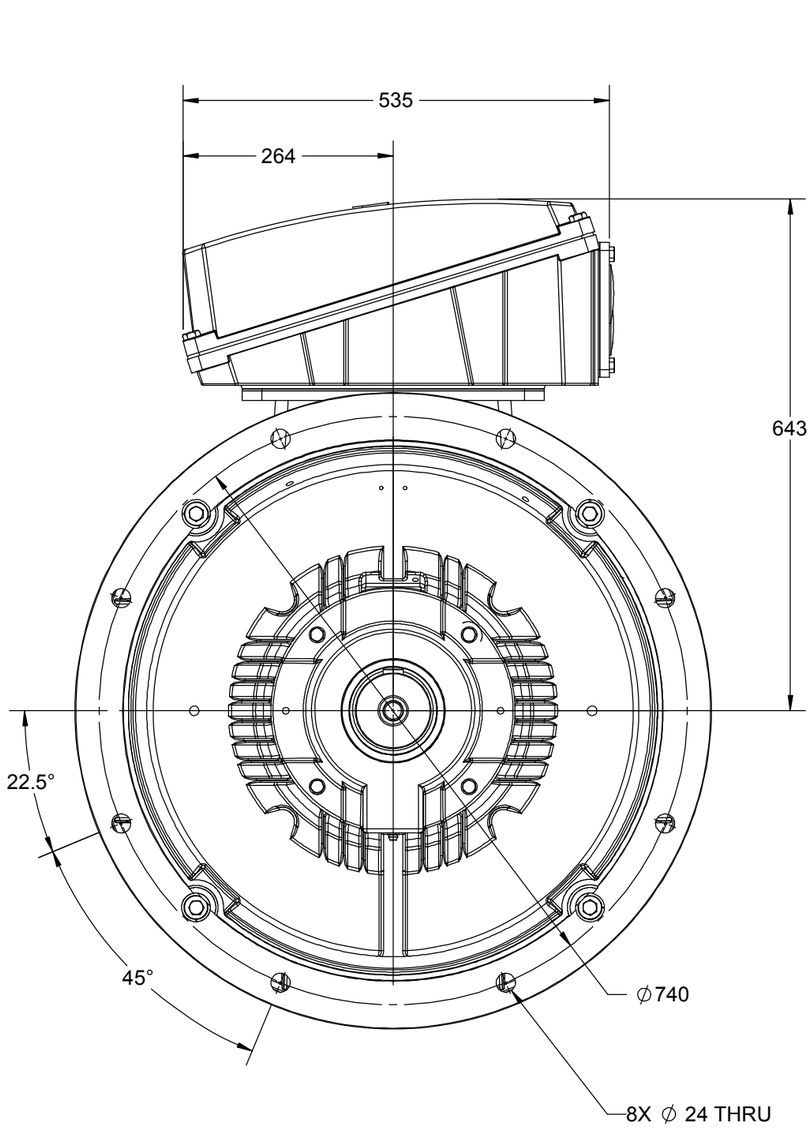
Nameplate Specifications

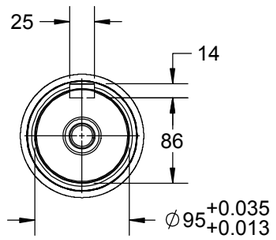
Output HP	270 Hp	Output KW	200.0 kW
Frequency	50 Hz	Voltage	400 V
Current	364.2 A	Speed	992 rpm
Service Factor	1	Phase	3
Efficiency	95.8 %	Power Factor	0.8
Duty	S1	Insulation Class	F
Frame	355M	Enclosure	Totally Enclosed Fan Cooled
Thermal Protection	No Protection	Ambient Temperature	40 °C
Drive End Bearing Size	6322	Opp Drive End Bearing Size	6322
UL	No	CSA	No
CE	Yes	IP Code	IP55
Number of Speeds	3		

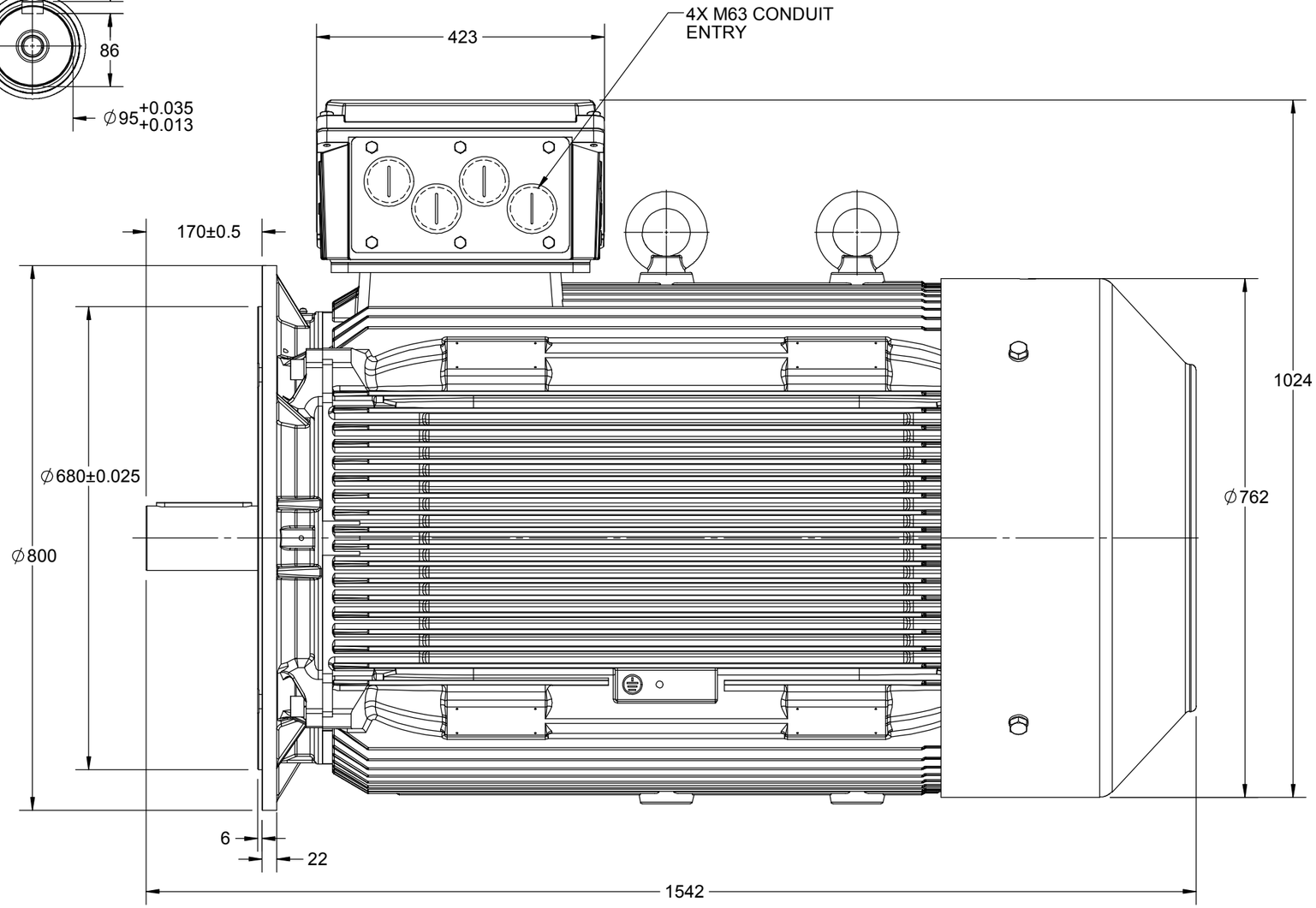
Technical Specifications

Electrical Type	Squirrel Cage	Starting Method	Direct On Line
Poles	6	Rotation	Bi-Directional
Mounting	B5	Motor Orientation	Horizontal
Drive End Bearing	2z-C3	Opp Drive End Bearing	2z-C3
Frame Material	Cast Iron	Shaft Type	Keyed
Overall Length	1542 mm	Frame Length	1010 mm
Shaft Diameter	95.000 mm	Shaft Extension	170 mm
Assembly/Box Mounting	Top		
Connection Drawing	8442000085	Outline Drawing	0235501831

OUTLINE



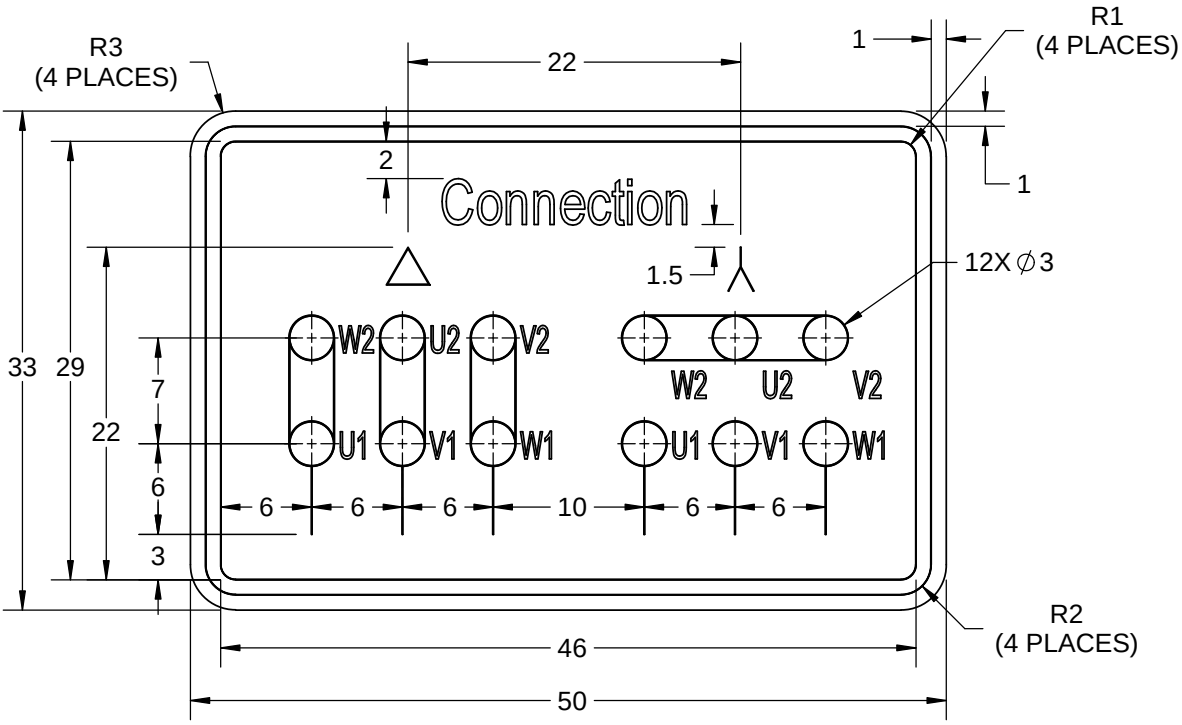




DRAWING REVISION B	REVISION BY NIV	DATE 08/05/2019		DRAWN BY JOY	marathon™ Motors
ECO ECO-0165600	APPROVED BY SR	DATE 08/05/2019		DATE 18/07/2014	
ECO DESCRIPTION MODEL UPDATED				APPROVED BY SBD	DESCRIPTION OUTLINE 355FR-B5 MTG. MOTOR TYPE: TCA
				DATE 18/07/2014	
				REFERENCE	MATERIAL / PROCESS/FINISH
				THIRD ANGLE PROJECTION	SIZE B / DRAWING NUMBER 0235501831 / SHEET 1 OF 1

DRAWING REVISION	REVISION BY	DATE
A	SN	13/01/2017
ECO	APPROVED BY	DATE
ECO-0116390	SBD	13/01/2017
ECO DESCRIPTION		
NEW DRAWING RELEASE		

GEOMENTRIC TOLERANCE		
LINEAR DIM	>0~6	±0.1
	>6~30	±0.2
	>30~120	±0.3



NOTES:

1. PRESSURE-SENSITIVE ADHESIVE COATED PAPER ON THE BACK OF SELF-ADHESIVE.
2. AT THE END OF YELLOW, WORDS, SYMBOLS, LETTERS ARE BLACK, BORDER IS BLACK.
3. THE TOLERANCE OF THE LINEAR SIZE OF THE TOLERANCE WITHOUT THE TOLERANCE BY THE TABLE.

8WD.442.2017

DRAWN BY: SN	REGAL™ Regal Beloit America, Inc.	
DATE: 16/12/2016		
APPROVED BY: SBD	DESCRIPTION: CONN DIAGRAM-NAMEPLATE	
DATE: 16/12/2016		
REFERENCE	MATERIAL	PROCESS/FINISH
THIRD ANGLE PROJECTION	SIZE: A / DRAWING NUMBER: 8442000085	SHEET: 1 OF 1

marathon® Motors

TerraMAX®

Model No. TCE2003A2121GAA001

U	Δ / Y	f	P	P	I	n	T	IE	% EFF at __ load				PF at __ load			I_A/I_N	T_A/T_N	T_K/T_N
(V)	Conn	[Hz]	[kW]	[hp]	[A]	[RPM]	[Nm]	Class	5/4FL	FL	3/4FL	1/2FL	FL	3/4FL	1/2FL	[pu]	[pu]	[pu]
400	Δ	50	200	270.0	364.2	992	1937.91	IE3	-	95.8	95.8	95.7	0.83	0.78	0.67	6.9	2.2	2.9

Motor type	TCE		Degree of protection	IP 55	
Enclosure	TEFC		Mounting type	IM B5	
Frame Material	Cast Iron		Cooling method	IC 411	
Frame size	355M		Motor weight - approx.	1877	kg
Duty	S1		Gross weight - approx.	1922	kg
Voltage variation *	± 10%		Motor inertia	11.5959	kgm^2
Frequency variation *	± 5%		Load inertia	Customer to Provide	
Combined variation *	10%		Vibration level	2.8	mm/s
Design	N		Noise level (1meter distance from motor)	70	dB(A)
Service factor	1.0		No. of starts hot/cold/Equally spread	2/3/4	
Insulation class	F		Starting method	DOL	
Ambient temperature	-15 to +40	°C	Type of coupling	Direct	
Temperature rise (by resistance)	70 [Class B]	K	tE time	10	s
Altitude above sea level	1000	meter	Direction of rotation	Bi-directional	
Hazardous area classification	Ex eb		Standard rotation	Clockwise form DE	
Zone classification	Zone 2		Paint shade	RAL 7016	
Gas group	IIC		Accessories		
Temperature class	T3		Accessory - 1	PTC 150°C	
Rotor type	Aluminum Die cast		Accessory - 2	-	
Bearing type	Anti-friction ball		Accessory - 3	-	
DE / NDE bearing	6322 C3 / 6322 C3		Terminal box position	TOP	
Lubrication method	Regreasable		Maximum cable size/conduit size	1R x 3C x 300mm²/4 x M63 x 1.5	
Type of grease	CHEVRON SRI-2 or Equivalent		Auxiliary terminal box	NA	

I_A/I_N - Locked Rotor Current / Rated Current

T_A/T_N - Locked Rotor Torque / Rated Torque

T_K/T_N - Breakdown Torque / Rated Torque

NOTE

ATEX/IEC Ex certified as per IEC/EN 60079-0; IEC/EN 60079-7

All performance values at rated voltage and frequency.

All performance parameters are subjected to standard tolerance as per IEC 60034-1

* Voltage, Frequency and combined variation are as per IEC60034-1

Technical data are subject to change. There may be slight variations between calculated values in this datasheet and the motor nameplate figures.

Efficiency	Europe	China	India	Aus/Nz	Brazil	Global IEC
Standards	IEC:60034-30-1		-	-	-	IEC:60034-30-1

REGAL

marathon® Motors

TerraMAX®

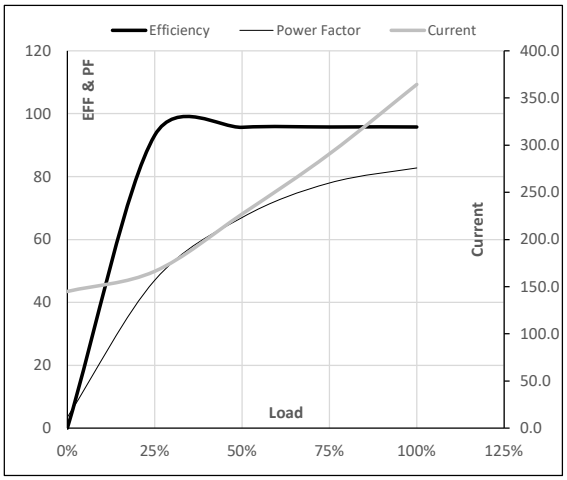
Model No. TCE2003A2121GAA001

Enclosure	U (V)	Δ / Y Conn	f [Hz]	P [kW]	P [hp]	I [A]	n [RPM]	T [kgm]	T [Nm]	IE Class	Amb [°C]	Duty	Elevation [m]	Inertia [kg-m^2]	Weight [kg]
TEFC	400	Δ	50	200	270	364.2	992	197.61	1937.91	IE3	40	S1	1000	11.5959	1877

Motor Load Data

Load Point		NL	1/4FL	1/2FL	3/4FL	FL	5/4FL
Current	A	144.7	166.3	226.9	290.7	364.2	
Torque	Nm	0.0	653.0	1308.5	1966.5	1937.9	
Speed	r/min	1000	998	996	994	992	
Efficiency	%	0.0	93.1	95.7	95.8	95.8	
Power Factor	%	3.5	47.0	67.0	78.0	82.7	

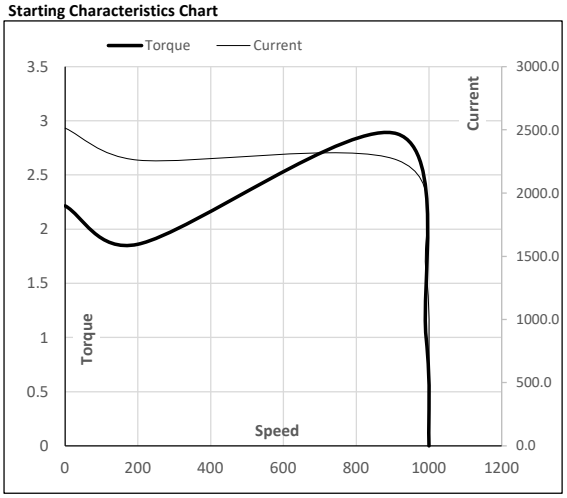
Performance vs Load Chart



Motor Speed Torque Data

Load Point		LR	P-Up	BD	Rated	NL
Speed	r/min	0	200	913	992	1000
Current	A	2513.3	2262.0	1368.1	364.2	144.7
Torque	pu	2.2	1.9	2.9	1	0

Starting Characteristics Chart



NOTE Refer data sheet for applicable standard and tolerances on performance parameters

Issued By
Issued Date

REGAL